

12 217. (Amended) The fan guard according to claim 13 further comprising a motor holder which is a hollow cylinder substantially located at the center of said main frame, and fixed thereto [each] the other ends of said guard blades for receiving therein a motor used for driving said rotor blades to revolve.

R E M A R K S

The office action and the prior art that has been cited and applied has been carefully considered together with the instant application and amendments have been made to the claims to more accurately define the present invention and to emphasize preexisting differences between the invention and the prior art. Also, the specification has been amended to make the corrections that were suggested by the examiner. Claims 1-12, 14-15 and 20-26 have been deleted without prejudice.

The Examiner rejected claims 1,2,4,5,8,9,12-15,17,20,21 and 24 under 35 U.S.C. §102(b) as being anticipated by Fujie. The remaining independent claim 13 and dependent claims 17-19 are not believed to be anticipated, taught or suggested by the Fujie patent. First of all, Fujie does not disclose a fan guard to be mounted beside a rotor device of a heat-dissipation fan for supporting the rotor device and supercharging the fan by transforming a tangential velocity of an air outflow into a static pressure. On the contrary, Fujie relates to a ventilating machine for simultaneously accomplishing supplying and exhausting of air or a gas, and heat exchange between the supply and exhaust air or gas.

Further, Fujie does not disclose that any one of the guard blades and any one of the rotor blades constitute a near letter C configuration in a cross-sectional view at a moment that a leading point of the guard blade aligned with a trailing point of the rotor blade in an axial direction. On the contrary, Fujie's stator blades are divided into two groups, which have opposite convexities (Figs. 1(a), 2(d) and 2(e); col. 2, lines 53-67). In other words, one half of the stator blades constitute a near letter C configuration with the rotor blades, but the other half of the stator blades do not. Therefore, amended claim 13 is not anticipated, taught or suggested by Fujie.

The Examiner further rejected claims 1,5,7,10,11,13-16,18-21,23,25 and 26 under 35 U.S.C. § 102(b) as being anticipated by Anderson et al. Independent claim 13 and dependent claims 17-19 are also not believed to be anticipated, taught or suggested by the Anderson et al. patent.

Anderson et al. does not disclose a fan guard to be mounted beside a rotor device of a heat-dissipation fan for supporting the rotor device and supercharging the fan by transforming a tangential velocity of an air outflow into a static pressure. On the contrary, Anderson et al. related to a two stage fluid driven turbine for being efficiently operated over a broad range of drive fluid velocities.

Further, Anderson et al. does not disclose that any one of the guard blades and any one of the rotor blades constitute a near letter C configuration in a cross-sectional view at a moment that a leading point of the guard blade aligned with a trailing point of the rotor

blade in an axial direction. On the contrary, Anderson's stator blades and rotor blades constitute a near letter S configuration (Figs. 2A~2D). Therefore, amended claim 13 is not believed to be anticipated, taught or suggested by Anderson et al.

The Examiner further rejected claims 13,16,18,20,23 and 25 under 35 U.S.C. §102(b) as being anticipated by Rao (PN 3,883,264). Independent claim 13 and dependent claims 17-19 are also not believed to be anticipated, taught or suggested by the Rao patent. Rao similarly does not disclose a fan guard to be mounted beside a rotor device of a heat-dissipation fan for supporting the rotor device and supercharging the fan by transforming a tangential velocity of an air outflow into a static pressure. On the contrary, Rao disclosed stator blades of non-radial configurations for reducing noise.

Further, Rao does not disclose the guard blades have a shape substantially identical to that of the rotor blades. On the contrary, it is shown from Rao's Fig. 2 that the shapes of the stator and the rotor blades are different. Moreover, Rao does not disclose or show that any one of the guard blades and any one of the rotor blades constitute a near letter C configuration in a cross-sectional view at a moment that a leading point of the guard blade aligned with a trailing point of the rotor blade in an axial direction. On the contrary, Rao's rotor blades are not required to have a specific configuration relationship with the stator blades. Therefore, the amended claim 13 is novel over Rao.

As noted in the above paragraph discussing on the rejection under 35 U.S.C. §102, no cited references disclose that the stator blades are designed as a part of a fan guard

which functions for supporting a heat-dissipation fan, and additionally functions for supercharging the fan by transforming a tangential velocity of an air outflow into a static pressure. As known, a fan guard is an essential part of a general heat-dissipation fan, and the supercharging function is important for a heat-dissipation fan to enhance heat-dissipation efficiency. As disclosed in the background portion of the specification, the structure of a conventional fan guard, however, has an adverse effect on the blast pressure enhancement owing to the undesired interaction between the airflow and the ribs. Therefore, the present inventor has developed a new fan guard structure as defined in claim 13, which has a function of supercharging the heat-dissipation fan in addition to supporting the fan.

For achieving the purpose of supercharging the fan, the present invention includes a feature that any one of the guard blades and any one of the rotor blades constitute a near letter C configuration in a cross-sectional view at a moment that a leading point of the guard blade aligned with a trailing point of the rotor blade in an axial direction, which is not disclosed in the cited references, either. The near letter C configuration on the condition that the guard blades are located downstream of the rotor blades facilitates the transformation of a tangential velocity of an air outflow from the rotor blades throughout the guard blades into a static pressure, thereby supercharging the fan. The related principle is described on pages 6 and 7 of the specification with reference to Fig. 3.

Fujie, although discloses that one half of the stator blades constitute a near letter C configuration with the rotor blades, the other half of the stator blades do not. In fact,

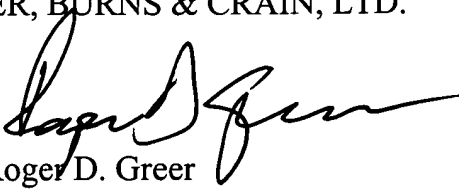
the other half of the stator blades constitute a near letter S configuration with the rotor blades. As disclosed on page 7 of the specification with reference to Fig. 4, a near letter S configuration also facilitates to supercharge the fan provided that the guard blades are located upstream of the rotor blades. For Fujie's stator blades 3 of Fig. 2(d), while the half of the stator blades relating to the near letter S configuration are upstream of the rotor blades as Fig. 4 of the present invention shows, the half of the stator blades relating to the near letter C configuration are upstream of the rotor blades which does not perform the supercharging function in a way that the present invention does. Therefore, the two actions conflict for supercharging the fan to some extent. On the other hand, referring to Fujie's stator blades 4 of Fig. 2(e), while the half of the stator blades relating to the near letter C configuration are downstream of the rotor blades as Fig. 3 of the present invention shows, the half of the stator blades relating to the near letter S configuration are downstream of the rotor blades which does not perform the supercharging function in a way that the present invention does. Therefore, the two actions also conflict for supercharging the fan to some extent. Conclusively, the supercharging purpose cannot be achieved according to Fujie's design, and in fact, it is not the thing that Fujie planned to do. By the way, for the two near letter C configurations on the condition that the guard blades are located downstream of the rotor blades respectively shown in the lower part of Fujie's Fig. 1(a) and Fig. 3 of the present application, respectively, they are quite different for the airflow.

From the foregoing, it is believed that claim 13 is not anticipated, taught or suggested by Fujie, Anderson et al., or Rao, and reconsideration and allowance of these claims is respectfully requested. Claims 16-19 necessarily include the features of claim 13 and in addition add other features and are also believed to be allowable.

Respectfully submitted,

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